

## CLAIMS

What is claimed is:

- 1        1.    A robot, comprising:  
2        a mobile holonomic platform;  
3        a camera coupled to said mobile holonomic platform;  
4        an arm coupled to said mobile holonomic platform; and,  
5        a first grasper coupled to said arm.
- 1        2.    The robot of claim 1, further comprising a monitor  
2        coupled to said mobile holonomic platform.
- 1        3.    The robot of claim 1, wherein further comprising a  
2        shoulder actuator coupled to said arm.
- 1        4.    The robot of claim 1, wherein said arm has an  
2        elbow actuator.
- 1        5.    The robot of claim 1, wherein said arm includes a  
2        first linkage, and a second linkage coupled to said first  
3        linkage, said arm having an actuator that moves said second  
4        linkage relative to said first linkage in a first degree a

5 freedom in a first mode, and in a second degree of freedom  
6 in a second mode.

1 6. The robot of claim 1, wherein said first grasper  
2 is coupled to a wrist joint of said arm.

1 7. The robot of claim 1, further comprising a second  
2 grasper coupled to said arm.

1 8. The robot of claim 5, wherein said first degree of  
2 freedom pivots about an elbow axis and said second degree  
3 of freedom slides relative to the elbow axis.

1 9. A robot, comprising:  
2 a mobile holonomic platform;  
3 a camera coupled to said mobile holonomic platform;  
4 an arm coupled to said mobile holonomic platform; and,  
5 first grasper means for grasping an object.

1 10. The robot of claim 9, further comprising a monitor  
2 coupled to said mobile holonomic platform.

1 11. The robot of claim 9, wherein further comprising a  
2 shoulder actuator coupled to said arm.

1        12. The robot of claim 9, wherein said arm has an  
2 elbow actuator.

1        13. The robot of claim 9, wherein said arm includes a  
2 first linkage, and a second linkage coupled to said first  
3 linkage, said arm having actuator means for moving said  
4 second linkage relative to said first linkage in a first  
5 degree a freedom in a first mode, and in a second degree of  
6 freedom in a second mode.

1        14. The robot of claim 9, wherein said first grasper  
2 means is coupled to a wrist joint of said arm.

1        15. The robot of claim 9, further comprising second  
2 grasper means for grasping the object.

1        16. The robot of claim 13, wherein said first degree  
2 of freedom pivots about an elbow axis and said second  
3 degree of freedom slides relative to the elbow axis.

1        17. A method for operating a robot, comprising:  
2 moving a mobile holonomic platform that is coupled to  
3 an arm;

4 moving an arm coupled to the mobile holonomic platform;  
5 and,  
6 actuating a first grasper to grasp an object.

1 18. The method of claim 17, further comprising  
2 grasping and moving a wheelchair.

1 19. The method of claim 17, further comprising  
2 capturing an image in a camera that is coupled to the  
3 mobile holonomic platform.

1 20. The method of claim 17, further comprising  
2 displaying an image on a monitor coupled to the mobile  
3 holonomic platform.

1 21. A robot system, comprising:  
2 a broadband network;  
3 a remote station coupled to said broadband network,  
4 said remote station having a handle that can be manipulated  
5 to generate movement signals that are transmitted through  
6 said broadband network;

7           a robot that is coupled to said broadband network and  
8   receives said movement signals from said handle of said  
9   remote station, said robot including;  
10           a mobile holonomic platform;  
11           a camera coupled to said mobile holonomic  
12   platform;  
13           an arm coupled to said mobile holonomic platform;  
14   and,  
15           a first grasper coupled to said arm.

1           22. The robot system of claim 21, further comprising a  
2   monitor coupled to said mobile holonomic platform.

1           23. The robot system of claim 21, wherein further  
2   comprising a shoulder actuator coupled to said arm.

1           24. The robot system of claim 21, wherein said arm has  
2   an elbow actuator.

1           25. The robot system of claim 21, wherein, said arm  
2   includes a first linkage, and a second linkage coupled to  
3   said first linkage, said arm further having an actuator  
4   that moves said second linkage relative to said first

5 linkage in a first degree a freedom in a first mode, and in  
6 a second degree of freedom in a second mode in response to  
7 said movement signals.

1 26. The robot system of claim 21, wherein said first  
2 grasper is coupled to a wrist joint of said arm.

1 27. The robot system of claim 21, further comprising a  
2 second grasper coupled to said arm.

1 28. The robot system of claim 25, wherein said first  
2 degree of freedom pivots about an elbow axis and said  
3 second degree of freedom slides relative to the elbow axis.

1 29. A robot system, comprising:  
2 a broadband network;  
3 input means for generating movement signals and  
4 transmitting said movement signals through said broadband  
5 network;

6 a robot that is coupled to said broadband network and  
7 receives said movement signals of said input means, said  
8 robot including;

9 a mobile holonomic platform;

10           a camera coupled to said mobile holonomic  
11       platform;  
12           an arm coupled to said mobile holonomic platform;  
13       and,  
14           first grasper means for grasping an object.

1       30. The robot system of claim 29, further comprising a  
2       monitor coupled to said mobile holonomic platform.

1       31. The robot system of claim 29, wherein further  
2       comprising a shoulder actuator coupled to said arm.

1       32. The robot system of claim 29, wherein said arm has  
2       an elbow actuator.

1       33. The robot system of claim 29, wherein, said arm  
2       includes a first linkage, and a second linkage coupled to  
3       said first linkage, said arm further having actuator means  
4       for moving said second linkage relative to said first  
5       linkage in a first degree a freedom in a first mode, and a  
6       second degree of freedom in a second mode in response to  
7       said movement signals.

1        34. The robot system of claim 29, wherein said first  
2 grasper means is coupled to a wrist joint of said arm.

1        35. The robot system of claim 29, further comprising  
2 second grasper means for grasping the object.

1        36. The robot system of claim 33, wherein said first  
2 degree of freedom pivots about an elbow axis and said  
3 second degree of freedom slides relative to the elbow axis.

1        37. A method for operating a robot, comprising:  
2        generating a platform movement command;  
3        transmitting the platform movement command through a  
4 broadband network;  
5        moving a mobile holonomic platform that is coupled to  
6 an arm in response to the transmitted movement command;  
7        generating a first arm movement command;  
8        transmitting the first arm movement command through the  
9 broadband network;  
10       moving the arm in response to the first arm movement  
11 command;  
12       generating a first grasper command;



13           transmitting the first grasper command through the  
14 broadband network; and,  
15           actuating a first grasper in accordance with the first  
16 grasper command.

1           38. The method of claim 37, further comprising  
2 grasping and moving a wheelchair.

1           39. The method of claim 37, further comprising  
2 capturing an image in a camera that is coupled to the  
3 mobile holonomic platform.

1           40. The method of claim 37, further comprising  
2 displaying an image on a monitor coupled to the mobile  
3 holonomic platform.